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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,666	02/14/2002	Huy M. Nguyen	RB1-041US	1711
29150	7590	08/05/2004	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE, STE 500 SPOKANE, WA 99201			CUNNINGHAM, TERRY D	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,666

Applicant(s)

NGUYEN ET AL.

Examiner

Terry D. Cunningham

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-42, 47 and 54 is/are allowed.
- 6) ☒ Claim(s) 1-32, 43-46, 48-53 and 55-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/14/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary of changes in this action

1. Responsive to the amendment filed 10 June 2004, the outstanding objections to the Claims, Title and the Drawings have been overcome.
2. Responsive to the amendment filed 10 June 2004, the outstanding enablement and indefiniteness rejections have been overcome.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-32, 43-46, 48-53 and 55-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manning (USPN 6,288,954) in view of Kajigaya et al. (USPN 5,426,616).

With respect to claims 1-32, the reference to Manning discloses, in Figs. 1 and 4, a circuit comprising: "one or data receivers (or "components") (18 and 24 of Fig. 1 of Manning)". The reference to Manning discloses the broadly circuit to generate a reference voltage V_{ref} . However, Manning does not expressly disclose the details for the circuit to generate a reference voltage V_{ref} . Kajigaya et al. disclose, in Figs. 27 and 37, a specific circuit to generate a reference voltage providing variable gain with high accuracy. This to generate a reference voltage is seen to include "a feedback receiver Q9-Q10, R10-R18 and Q58-Q65, Q49, R1-R9

and Q41-Q48 or Q3)”, “a reference voltage driver (OA1, OA2 or Q1-Q2 and Q50-Q52)”, “a register (DEC1 and DEC2)” and a counter (CTRN and CTRB)”. Therefore, it would have been obvious for one skilled in the art to use the specific circuit to generate a reference voltage of Kajigaya et al. for the broad circuit to generate a reference voltage of Manning for the expected results of variable gain with high accuracy.

With respect to claims 43-46 and 48-52, the combination would provide “a receiver means (18 and 20 of Manning)”; “feedback means (OA1, OA2 or VLS of Kajigaya et al)”; “driver means (Q9, Q10, R10-R18 and Q58-Q65 or Q49, R1-R9 and Q41-Q48 or Q3 of Kajigaya et al.)”; “a nominal reference voltage (VRB, VRN or VLB)”; and “routing means (the connection between VL (Kajigaya et al) and Vref (of Manning) and the conductors connecting Vref to 18 and 20 of Manning).

With respect to claims 53 and 55-62, clearly the above discussed combination to Manning in view of Kajigaya et al. will provide the recited method.

With respect to claims 63-73, the above combination discloses “a reference voltage driver (Vref of Manning and all of Figs. 27 and 37 of Kajigaya et al.)”; “a plurality of receivers (19₀-18_n and 20₀-20_n of Manning)”, all connected and operating similarly as recited by Applicant.

With respect to claims 45, 46, 56 and 71, the circuit of Fig. 33 (which controls the circuit of Fig. 27) of Kajigaya et al. would reasonably be considered to be a “register”.

With respect to claim 72, the circuit of Fig. 37 of Kajigaya et al. expressly shows counters CTRN and CTRB that control the circuit of Fig. 27.

Examiner has fully considered Applicant’s remarks for the above rejection and has not found them to be persuasive.

Applicant remarks “it is respectfully submitted that there is no particular relationship or similarity between the input buffers 18 and 20 of Manning and any feedback aspects of Kajigaya et al.” However, this statement would be seen to be a direct contradiction to the above rejection.

For claims 1, 17, 43, 53 and 63, Applicant merely points out particularly elements purported to be missing in the combination, but provides no discussion whatsoever in support thereof.

With respect to claims 1, 17, 43, 53 and 63, Examiner contends that since the “feedback receiver” and the additional “data receivers” are FET differential amplifiers, it is clear that they will necessarily have “substantially similar input characteristics”.

With respect to claims 43 and 53, since the distributed reference voltages will all be provided via connecting lines to the differential amplifiers, Examiner contends that the “distributed voltage” will be “approximately the same”.

With respect to claim 63, Examiner contends that the operation highlighted is inherent in the negative feedback combinations cited in the rejections.

With respect to Applicant’s discussion concerning claims 43-52 being means-plus-function recitation under 35 U.S.C. § 112, sixth paragraph, Examiner agrees that such claims appear to meet the requirement therefor. Examiner points out, however, that nowhere is the specification seen to provide a disclosure of any elements that would not be deemed to be “equivalents. Examiner therefore contends that the elements discussed in the combination would be deemed by one skilled in the art as equivalents.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 571-272-1742.


The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.

TC
August 4, 2004


Terry D. Cunningham
Primary Examiner
Art Unit 2816